THE

PALESTINE EXPLORATION FUND.

PREFACE.

AT a meeting of the Executive Committee, on March 14th, 1871, the following resolutions were passed, and ordered to be published in the next *Quarterly Statement* :—

"(1.) That the secretary be instructed to write to the chairman of the American Committee, and point out the importance of speedily arriving at some plan of united action, acquainting him at the same time that the English Committee have under consideration a plan for completing the survey of Palestine west of the Jordan, connecting the new work with those portions which have already been surveyed by their officers, Captain Wilson, Captain Warren, and Lieutenant Anderson.

"(2.) That Captain Wilson be directed to draw up a report showing the probable cost and best mode of conducting such a survey, with a view to recommending a plan of action to the General Committee, if possible, in combination with the labours of the American Association."

These resolutions are here published, as a preparatory step to the new expedition contemplated by the Committee. It is proposed to get this ready to leave England early in the autumn, and commence work at once. It will be under the command of officers of the Royal Engineers, assisted by sappers. The American Association has accepted the share of work proposed, and will, as soon as possible, fit out an expedition to carry on simultaneously a similar work east of Jordan. The results will be published, it is hoped, simultaneously. The survey will include examination, measurement, and sketches of ruins and inscriptions.

Excavations will be undertaken wherever they may appear necessary. It is hoped that large additions will be made to the Society's photographs. Periodical publications will be issued, giving the reports of the work in progress and the discoveries made, with, if possible, illustrations; as has been done for the last two years in the *Quarterly Statements*.

Estimates of the cost of this undertaking will be prepared for publication in the next *Quarterly*. The summer will be occupied in organising the expedition, and in collecting the funds necessary to begin it. Meantime, the Committee will be glad to receive promises from those who intend to support the work, and for that purpose wish to add their names to the list of annual subscribers. A public appeal will be made, and the readers of this preface, who are the present supporters of the Fund, will be able, by their own personal influence, if they will kindly exert it, very largely to increase the list.

The present number of the *Quarterly* contains Captain Warren's paper on Philistia, which has been kept back for some months for want of space. Mr. Palmer's concluding paper will be issued in the next number. The map of Moab supplements the map published in January, and embodies some of Captain Warren's work.

An expedition of great interest is contemplated by Reshid Pasha, Governor of Damascus, for the early summer. It will cross the desert, hitherto unvisited by Europeans, between Damascus and Petra, to the east of Moab. Mr. Tyrwhitt Drake will, if possible, accompany it on behalf of the Fund. Mr. Drake is now in Syria, engaged in getting copies and photographs of the Hamáh inscriptions, mentioned by Mr. Palmer in his "Preliminary Report."

THE PLAIN OF PHILISTIA.

BY CAPTAIN WARREN, R.E.

It is no idle dream to suppose that Palestine might, in a few years, become a land flowing with milk and honey; even with the present inhabitants, under an upright Government, the land would in a short time change its appearance, and, as it is, the country has changed in parts to a small extent, due to the alteration in the Government, brought about by the influence of public opinion of the West

asserting itself even in Syria. Look how those villages have begun to thrive which have been mortgaged to the Greek converts; and watch the cloud resting over the Christian village of Beitt Jala in the autumn sun, with its groves of olives, while all around is the brazen sky.

At present, however, Palestine—Philistia in particular—has not a tithe of the population that it would support; its fruit trees are left to take care of themselves, its waters allowed to run underground instead of on the surface.

Philistia consists of an undulating plain from 50 to 300ft. above the level of the sea, reaching thirty-two miles from Ekron to Gaza, with a breadth of from nine to sixteen miles. To the east of this the hills commence, not the hill country, but a series of low spurs and undulating ground, culminating in hogs' backs running nearly north and south, and rising in places to 1,200ft. above the ocean; to the east of these there is a steep descent of 500ft. or so to valleys which break through the barriers much in the same manner as we find the rivers forming passes through the chalk hills between Aldershot and Chatham. To the east of these again the hill country commences, and in two or three miles we rise to altitudes of 1,700 to 2,000ft.—the back bone of the country being at an elevation of 2,400 to 3,000ft.

In the hill country the spurs, not more than one mile or so apart, are often separated by narrow ravines 1,500 to 2,000ft. deep, at the bottom of which in the rainy season rapid torrents roll. Follow them into the plain and see what becomes of them; but first look at the existing maps. In one they appear to traverse the plains in a different direction to what they do in the next. The fact is, the bulk of the water reaches the ocean underground; on coming into the plain it forms marshes and pools, and quietly sinks away, while the bed of the stream itself in the plain is merely a narrow ditch some 6ft. wide and 4ft. deep. You may leave the water at the commencement of the wády mouth, ride over the plain without seeing anything of it, and meet it again welling out of the ground close to the sea shore, forming wide lagoons there. Now if proper precautions were taken, were the people industrious, and the country cultivated and clothed again with trees, the waters flowing in the ravines might be conducted over the plains in the early summer months and induce the rich soil to yield a second crop.

The encroachment of sand is one of the most serious evils now to be dreaded on the coast of Palestine. Already Gaza and Ashdod are threatened, and nothing is done to arrest the enemy, though there is little doubt but that the danger might be averted by obliging the landed proprietors to take common action against their silent foe.

On the coast near the mouth of Wády Semsim, which at this point flows north-west, the sand encroachment, proceeding N.E. by E., is evidently arrested by the waters of this stream, for on its left side are high sand banks dropping abruptly into the water, while to its right is low cultivated land.

The method of progression of the enemy here is plainly visible, for the

whole country consists of sand-banks sloping down at 10° towards the prevailing wind, and at 30° to 35° on the lee side. Thus the sand is gently rolled up the slope of 10° by the wind, and then falls down the other side by its own weight, so that it actually does quietly advance towards the object it intends to overwhelm in banks 30 to 50ft. in height.

It is curious in traversing these sand hills to come upon the site of some orchard which has been covered perhaps for hundreds of years. You suddenly come upon a sort of crater in the sand, 40ft. deep, at the bottom of which flourishes an apple tree; then you come upon a fig tree growing in the same manner, and lastly upon a little patch of ground, quite below the level of the sand, with a house attached; but even this patch of ground has several feet of sand over it. The husbandman's chief duty appears to consist in dragging up the sand in baskets from the bottom of the craters to the surface. The trees growing in these little hollows are very fruitful, and no wonder, for they have no wind, plenty of sun, and good moist earth to grow in; the superincumbent sand, being a non-conductor, prevents evaporation from the soil below, and keeps it moist through the summer.

During the time I was in Philistia, I examined and surveyed 800 square miles, and my time was so fully taken up with the work by day and night, that there was little time for any other examination; the latitude and longitude of more than 200 points on this plain are now fixed and published for the first time.

We were out from sunrise to sunset every day, but we did not suffer from the heat, though it was often up to 100° in the shade during the afternoon; in the night time it was comparatively cool, going down to near 70°, except during the siroccos.

May 24, 1867.—We left Jerusalem on a month's tour in the plains of Philistia, intending to try and photograph the monuments in the mosque at Hebron, and we were provided with letters from the Pacha of Jerusalem for that purpose. We travelled with much pomp and ceremony to Hebron, being accompanied by a lieutenant and four zaptis, who were to secure us admission to the mosque. The result of this expedition is described p. 39, *Recovery of Jerusalem*. I had had a sharp attack of fever on 22nd May, and only got out of bed to get on horseback. Corporal Phillips also caught the fever on our arrival at Hebron, but our ride down to Gaza, where we arrived May 29, brought us round again. Riding all day in a hot summer's sun is a queer remedy for fever, but I have tried it more than once with success.

On our way down we met women in the villages acting the part of mourners. The conscription was going on, their husbands were being taken away. Soldiers, they say, never return to their native villages, so they are mourned as dead men, and the widows marry again shortly.

May 30.—I had been requested to proceed a few miles S.E. of Gaza in search of the Tels Jema and Gerar, supposed to be the ruins of the city Gerar (Gen. xxvi.), and spoken of by several authors as having been

discovered by the Rev. J. Rowlands. In Van de Velde's Memoir (1858), p. 115, we have the following:—"Um el Jerar, the site of Gerar, at the foot of Tel Jema in Wády el-Adar, recognised by a few scattered stones in the vicinity of some fine springs, was therefore laid down in our maps according to the information of the natives."

On making inquiries I easily learnt the position of Tel Jema, and the only difficulty in the way was the permanently unsettled state of the country about this borderland, which being almost common ground appears to be constantly liable to raids from tribes from the south. Just now, the wheat having been recently gathered, there were many wandering bands of strange Bedouin about, who appeared to sniff our two zaptis from afar and long to punish them.

On making arrangements for passing a night at Tel Jema, our zaptis broke out in mutiny; so paying off the most blustering of the two, we set off with the remaining man, a black, ordering the muleteers to encamp beside the "fine springs" at Gerar or Tel Jema.

We soon left Gaza behind us and entered upon a rolling plain covered here and there with the stubble of the wheat. The natives of these parts are roving farmers—a turbulent lot of a nondescript race, who are constantly in trouble either with the local government or with their own allies the Bedouins; every now and then compelled to build themselves villages, they are again rendered homeless by raids from the south, and thus being constantly exposed to dangers from all sides, they are somewhat reckless in their behaviour, and it is not uncommon to hear that the soldiers of Gaza have been ordered out against them. Still they appear to thrive and to be well-to-do, no doubt partly on account of the richness of the soil, but partly by doing a little foraging on their own account and putting it down to the Bedouin, or else by acting as "jackals" in the raids which are sometimes made on the villages of the fat Philistian plains.

Their land may—must—be very productive, but as we wander on up and down the wády banks and over the swelling hills, it appears to be a series of semi or wholly barren wastes, interspersed with sand-hills on which linger a few solitary fir trees, though in the far west, on the sea coast, may be seen clusters of date palms around the villages, with the line of telegraph wires from Gaza to Alexandria, rudely preventing our losing ourselves in thoughts of the past.

I had always pictured to myself a peculiar region for the scene of Isaac's life, perhaps from its name of Goshen corresponding with the name of the fertile Egyptian tract (Gen. xlvii. 11), "the best of the land," something to compensate for the difficulty of his position. But there is nothing at the present day to bear out the idea, and it strengthens our opinion of his obedience to the divine command when we find how he gave up the pleasures of freedom, of a wandering life, or of settling in a country like the rich plains to the north of Gaza, in order to dwell in this tame and monotonous solitude. Perhaps to his gentle and peaceful nature there may have been something congenial in

the character of this country, but to a European it simply presents the disadvantages of a desert and settled life without the joys of either.

We had not advanced far into the plain before we came across Wády Sherîah, and I became aware that this portion of Van de Velde's map, put in on Bedouin authority, was hopelessly in error; but I found little chance of correcting it, for there are few prominent points, and one sand-hill is the veritable twin brother of the next, and so on; after travelling south from Gaza about eight miles, we came full in front of Tel Jema on the south side of Wády Gusseh, having to its west a little patch of cultivated ground on which melons were growing. But where are our tents, and where are the fine springs of Gerar? *Mafish, Mafish;* nothing but Tel Jema and its melon beds. The Tel itself is a mound similar to those of Jericho, the Jordan, and Arak Menshiyeh, artificial and covered with pottery and broken glass; and no doubt marks the site of some ancient stronghold or city. I now inquired from the natives for other ruins, but they denied there being any nearer than Sbeta, or any water either, except Tel Sherîah, where they say there are streams of water. Is not this latter likely to be the looked-for Gerar seen by Mr. Rowlands? At Tel Jema itself they said they obtained their water from Tel Ajur on the sea-coast, the mouth of the Wády Guzzeh, and there we were directed to proceed as being the only place where our tents could be pitched. There are here a lagoon and some springs of medicinal water, very nasty to the taste, but just the very stuff to carry off the ill effects of our fever, and we returned to Gaza next day nearly well. On our road through the sand-hills we came across a great lizard, looking like a small crocodile; we gave chase and ran it to bay under a little sand cleft. On going up to it it puffed itself out, and opened its mouth so wide that we stood around not venturing to touch the beast, and eventually stunned it by swinging a leaden plumb-bob on to his head; we then tied him hand and foot and fastened him on the rug behind the saddle of the dragoman, who was rather nervous about his companion coming suddenly to life again. We then rode on to Gaza and met a good many Bedouin on the road, who shouted out after us "Warren! Warren!" It did not strike me at first as odd, but when they all began shouting out my name we were a good deal puzzled. On getting into camp we tied the beast, now quite lively again, to a stake in the ground, and let him get in the shade under the lee of my tent. The townspeople soon began to flock around us, and I heard repeated exclamations of "Warren!" and on going out to see the reason, found them pointing to the lizard, and discovered that I had a namesake inhabitant of the desert. This animal is well-known on the banks of the Nile, but I am not aware that it has been seen in Syria before by Europeans, and as I was anxious to get him forwarded to England, I sent him in a cage to Dr. Chaplin at Jerusalem, who identified him as the Nile lizard; he was taken to be examined by some of the English residents, but after getting into a harmonium and refusing to be dislodged for some time,

it was considered desirable to return him to the care of Sergeant Birtles, who was encamped outside the town. He throve very well until a certain Sunday morning, when he was tied hand and foot and put into a pit so as to be very safe, and a Nubian guard was told to watch that he did not escape. On return from church he was not to be found, and nothing was heard of him for three years. When we were leaving Jerusalem in 1870, we learnt that this animal, when cooked, is a very favourite dish of the Nubians, and that some Nubian friends of our black guard having come to visit him, they had together regaled themselves on my unfortunate namesake.

At Gaza we were encamped under an aged tamarisk tree (see No. 255 photo.). I paid a visit to the governor, who gave me leave to visit the mosques, and served me with the best cup of coffee I have tasted in Syria. The old church, described by Porter, is well worth a visit. On one of the white marble columns in the nave is a Jewish seven-branched candlestick sculptured; it was out of our reach, but there is no doubt about its existence; it is on a square of about six inches. Some of the columns appear to be of granite. We could find no vestige of ancient Gaza outside the city. 3rd June, left for Askelon, thirteen miles in a straight line. At the present port to N.W. were bones and jars collected ready for exportation, and a few coasting-boats in the offing. Passing over the drift sand we came here and there to craters, thirty to forty feet deep, at the bottom of which would be growing a fig or an apple tree laden with fruit.

ASKELON.

From our tents, pitched upon the brow of the cliffs overlooking the ocean, we commanded a splendid view of the ruined city; its walls thrown up in fantastic confusion half covered by the luxuriant growth of fruit trees or by heaps of drifted sand—strange contrast of fertility and desolation: useless it would be to attempt a more complete description than that given in Murray's guide, or the "Land and the Book." I shall content myself with touching on two or three points.

The city is four-and-twenty miles, as the crow flies, from the present ruin of Timnath, whence Samson came to plunder the thirty change of garments for the payment of those who had expounded his riddle; though this is the only incident with regard to the whole city, recorded in the Bible, yet it is impossible to visit these ruins at the present day without realising, perhaps more than in any other ancient city west of Jordan, the utter overthrow of power that has taken place, the desolation which reigns supreme; the walls of indurated sandstone, though now of small-sized stones, were once formed of massive blocks, as is seen by the remains here and there that have not been cut down for other purposes or carried away to Acca or Saidon; great columns of granite seventeen to eighteen feet in length, and two to two and a half feet in diameter, project from the faces of the existing walls, used as thorough bonds, though hardly necessary, it seems, for the intensely

hard mortar has united the stones into one solid mass, which has only again been broken by some great force, probably gunpowder. Examine these walls (photos. Nos. 257—259), great discs of masonry overlapping each other in confusion, and it is apparent that they have been overturned at no very remote period. Some of these walls may have been built by the ladies of England as an offering to their country and lion-hearted king ("Chronicles of the Crusades") during the Crusades.

The view (No. 256) shows us the sycamore fig tree, now loaded with its burden of fruit, the hollow fig, which, though refreshing when picked from the tree, is considered too inferior a fruit to be eaten by any but the poorest of the people. See how the trunk of the tree, acted upon in its early growth by the prevailing wind, the sea breeze has bent over the narrow pathway for nearly thirty feet, at a distance of eight to ten feet from the ground, offering a secure seat to any who, like the lowly Zacchæus, wish to have a view of all that pass that way.

In No. 256 we have a picture of the sea coast with the surf breaking on the shore. Just outside that surf, as we were coming up from Gaza, we observed a large shark moving about, and on going down to the beach at Askelon at sunrise to have a swim, I saw two sharks loitering about within a few yards, apparently waiting for me, and not wishing to gratify their appetites I dabbled in shallow water. These sharks are larger than any I have seen in these latitudes, and their appearance reminds us that this is the coast on which the prophet Jonah was disgorged by the great fish that had swallowed him up. A few miles further up the shore to the north is the Neby Yunas, the monument of Jonah's, which vies in tradition with another point near Saidon as his landing-place. The booths used in the gardens by the watchmen of the fruit trees also remind us of his history, for they are similar in construction to that gourd-covered booth he rested in outside of Nineveh.

Mentioning booths, I would draw attention to 1 Kings iv. 25. *And Judah and Israel dwelt safely, every man under his vine and under his fig tree.* This, of course, is a poetical expression, but as at the present day, during a portion of the year, the natives actually do live under trees or in booths, it is reasonable to suppose that the same custom obtained among the Jews, and, in fact, we know it did obtain, Lev. xxiii. 42; Neh. viii. 14; 1 Sam. xxii. 6. And such being the case it is probable that the names of trees giving the necessary shelter would be used in the poetical expression.

To live in booths shaded by the vine, by creepers, by dry bushes, is very common at the present day, but I am not aware that the fig tree is ever used as a shelter for man. On the contrary its rank leaves have a most repulsive odour, the juice is supposed, when it touches the eye, to produce ophthalmia, and to sleep under its shade is said to be a certain receipt for the production of fever. In Spain, also, there is the same opinion; a fig tree near a house is said to be unwholesome, and to keep an animal under it for any length of time is supposed to produce madness or death.

About Askelon there are the most delicious apples, which were just now ripe, fully equal in flavour to any I have tasted elsewhere, but, in keeping with so many of the Palestine fruits, they are sadly in want of proper treatment; they have dwindled down to one-half the bulk of an ordinary English eating apple. Dr. Thomson speaks of these apples of Askelon, but Dr. Tristram ("The Land of Israel," p. 604) suggests that he mistook the quince for the apple, and doubts whether apples grow in Palestine at the present day.

Although so little remains of ancient Askelon *in situ*, coins and bronzes are constantly being turned up by the plough and by the crumbling of earth during the heavy rains; at this time agents come down from Jerusalem and buy up all that they can lay hands on, and sell at immense prices to pilgrims in the Holy City. I was able to secure on the spot some small bronzes of the Egyptian gods, Osiris and Isis, and also a very elegant mutilated figure of Hercules, and the remains of a fish god; the greater portion, however, of the bronzes are distinctly Egyptian, and similar to those in the British Museum; the coins found are generally Roman, or of the Crusaders, or Cufic.

5th June, 1867.—Askelon is ten miles from Ashdod in a straight line. We left the former at 8 a.m., and passing Abu Mushad, an eminence and tomb from whence the minarets of Gaza can be seen, we passed in a few minutes remains of buildings of Ibrahim Pacha, and among other objects a well 120 feet deep, with a staircase running down around the side. Leaving Mejdel with its minaret to our right, we came on Hamâmeh at four miles, situate on the edge of the sand-drift, the next village to be submerged. A Greek Christian came out to meet us and insisted on our coming into his courtyard and feeding on watermelon, and then produced several articles for sale, among the rest a pot of well-preserved bronze Roman coins. We had not time, then, to strike a bargain, and on inquiring for them a few weeks after I learnt that a commissioner for a collector at Beyrout had carried them off. On leaving this village we kept the drift sand close to our left, and shortly passed a small masonry erection in which water is daily deposited by the people, from the neighbouring villages, for the benefit of passers-by—a very kindly arrangement in a dry land if they would only take the trouble to keep it clean. Passing now over a country tame and uninteresting, we arrived at Esdud (Ashdod) shortly after mid-day. I went from here to the sea beach, a distance of three miles, in search of any remains of the ancient city, but nothing could I see but endless mounds of drift sand, over which we stumbled ankle deep; on the shore itself are the ruins of a rectangular barrack of sandstone, similar to the walls of Askelon, and at about a third of the distance on the road to Jaffa. It probably was a station connecting the two cities; it measures about 120 feet by 50 feet, with semi-circular flanking towers at each angle, and two on either side. No ancient pottery or glass was observed about, but there were a few broken bottles of modern construction, which looked as if they had once held beer.

Ashdod itself is a mean Mahometan village, situated on a gentle eminence, surrounded with beautiful gardens and palm trees, but with no signs whatever of its ancient grandeur visible, if we may except the sarcophagus shown on photograph No. 263, supposed to be of an early type. The view of the Persian wheel (N'aura) driven by a camel, and of a palm tree, Nos. 264 and 262, were also taken in this village. To the west the sand rises high above the gardens, and each year swallows up a portion. In the centre of the village is the usual elevated mound of rubbish, here of a considerable height, ending in a conical peak—a good theodolite station, and there we proceeded at sunset, just the worst time for observing, as then the fellahîn are returning from their daily labour. We were soon surrounded by the entire village, who in a half defiant, half good-humoured manner advanced to the attack, determined to capture our instrument, which they considered to be exerting some sinister influence over the country; luckily the mound was steep, and as they came up we pushed over the foremost upon those behind and managed to keep our position until the pole star was observed. I was obliged, however, to complete the observations next day when the men had left the village. The sheikh came in the evening and made his apologies for the uproar, and affected great penitence.

On June 6th and 7th the country to north and east was surveyed. About one mile N.E. of Ashdod the wády from the Valley of Elah (now Wády es Sumt) effects its junction with another from the south which runs by Kuratiyeh. They are here the merest ditches, about 6ft. wide and 4ft. deep, and just now are quite dry. Their course was followed to the sea coast at a point four miles north of Ashdod, where they form lagoons of shallow water supplied by the oozing up of water from the soil, and separated from the ocean by a bar of sand. Neby Yunas is built on an eminence at this point.

The villages on the flat plain about Ashdod are as like each other as so many peas, and there is very little of interest to be seen in them, but they had nearly all to be visited, if it was only for making sure of their names, as the people were not at all inclined to give information. Many of them had been down south working on the Suez Canal, and seeing our surveying instruments, they concluded that the English were going to cut a rival canal through Philistia and the Judean mountains to the Dead Sea, and to this they strongly objected, as they considered it would be the signal for our retaking possession of our inheritance; for they told me over and over again that they had taken the land from us, and that we should wrest it back from them again, but then many of them added "You will have to fight for it, we will not give it up without a struggle."

At el Juseir we saw a white marble column and effaced capital, and at Summeil, a few bevelled stones. The ruins of the ancient towns about here are probably buried only a few feet below the soil.

On the evening of 7th June we were camped at the foot of Tel es Safiyet, the *Alba Specula*, or Blanche garde of the Crusaders, probably

Gath of the Philistines. It is fifteen miles due south of Ramleh, and twelve miles to S.E. of Ashdod; the meaning of its name, *Alba Specula*, will be understood on reference to the photograph (No. 265), where the glittering white chalk cliff at S.W. angle is shown, a conspicuous object which can be seen for many miles to west.

To the east the country was surveyed, the first range of the hill country; the only villages of interest visited were Kudna, where there are remains of a castle, ancient walls, and large stones about; much of it appears older than the time of the crusades, but there are also pointed arches, casemates, and plenty of modern ruins. It is five miles S.E. of Tel es Safîyeh, and to its north by two miles is the village of Deir Dubân, where are enormous caves similar to those described by Dr. Robinson at Beit Jebrin. In one several inscriptions were found cut on the rock and on plaster, apparently over a passage which has been built up. The Syrian Bishop of Jerusalem pronounces them to be Syriac, and to be the work of Christians who emigrated here from the Holy City at the time of the Persian invasion. There is a Byzantine cross over one of the inscriptions.

On June 10th we left Tel es Safîyeh for Yebneh Port, a distance of seventeen miles in a straight line N.W.; passed along the Wády Sumt by Tel et Turmus (a village with no hill) and Kurtineh, and then turning off to al Mesmiyeh went due north over undulating hills past Emazmah (ruin) to Shahmeh on the north bank of Wády Surah. This latter wády runs N.W. through a gap in the hills of el Mughâr and Kutrah, passing to the east of Yebneh town, and approaches the ocean about one mile to the north of the ancient port of Jamnia (Yebneh). There are at the mouth of the wády lagoons and fresh water springs; but no water in the wády during the summer months.

I may here make a suggestion with regard to the position of the cave of Makkedah where the five kings took refuge when pursued by Joshua from Gibeon. Joshua x. 5.

We have, Joshua xv. 41, the towns "Gederoth, Bethdagon, and Naameh, and Makkedah" placed together, and we have at the present day, Kutrah and Mughâr close together, Naameh six miles N.E., and Beit Dejan about twelve miles to north. I have to suggest that the village of el Mughâr (the cave) is the modern name of the ancient Makkedah, and the desirabilty of making further researches at this place. It is true that several authorities place Makkedah further to the south of this point by several miles, but the writer of the article "Makkedah," Smith's "Dictionary of the Bible," appears to establish the fact that it must have been situate at no great distance from Ramleh, and el Mughâr is less than eight miles from that city.

There was little to be seen at Yebneh town except the church now used as a mosque, but excavations would probably uncover the old fortifications; it is admirably situated as a fenced city. The ancient port is some four miles distant; a large plan of it is given on one of the Admiralty charts of the Syriac seas. The photograph No. 267

gives a view of the southern end of the port, where are many confused ruins.

From this point we rode up to Jaffa, ten miles, to obtain our letters, the weather extremely oppressive in spite of the sea breeze. —"As cold water to a thirsty soul, so is good news from a far country."

June 12th. We left Jaffa for the little village of Surah, twenty-three miles in a straight line. For the first ten miles to Neby Ghundeh, we passed remains of walls and terraces on the hills which have now a coating of drift sand over them. We passed next through olive groves and gardens past Zernuka, until crossing over some undulating hills we came across the village of Akir, the ancient Ekron, with no remains of its fallen greatness. The people were very civil, and one old man came out and babbled forth a story about the villagers being descended from Jews. As it is five miles from Yebneh town, the great seat of learning in the time of the Maccabees, there may be some foundation for the story. Ekron is on a swelling mound only about two miles to the north of the Wády Surah, the valley up which the milch kine probably conducted the ark to Bethshemesh, and during harvest time there is a good road all the way. From here we gradually ascended the hills by Mansurah and Kuldah, and passing the ruins of Beit F'ar to our right, arrived at the 'Ain of Surah by night-fall, 870ft. above the sea. We had now a chapter of accidents; the dragoman, who had heard of his father's death that morning, forgot what he was about, and losing sight of us, wandered over the country, leaving us to find our own way. He did not arrive at camp till some time after us, and when he saw me he exploded in sobs, declaring that to have lost us on the road was a far greater grief to him than to have lost his father; he forgot to tie up his horse or give it drink, and so the poor beast tried to satisfy himself and tumbled into the well, whose waters were nearly 4ft. from the surface. On our way in the dark the observation book had been dropped, and add to this our head muleteer was taken ill with strong fever, and Musa, his second, was stung by a scorpion on the big toe. The poor fellow was brought into my tent in a very exhausted state, and on finding that the application of strong liquid ammonia to his toe had no effect, I applied it to his nostrils, saying, "Musa, smell this." He sniffed, but it had no effect. "Try again, Musa." Again he sniffed, but his agonised writhings prevented his nose touching the bottle. "Sniff as strong as you can, Musa," and this time he regularly inhaled the blistering vapour, and fell back motionless as though shot. We had hardly time to think what to do next or to listen to the growing plaint that Musa had been killed, when a loud splash was heard, and a cry that the dragoman's horse had tumbled into the well. The poor beast was swimming, but had no chance of getting out by himself. The guy ropes of the tents were quickly on the spot, one we tied round his head and shoulders, and the other tight to his hock, and soon we were all lugging away at the

animal. By some desperate efforts we at last got him on dry land somewhat worried by the ropes, but not permanently the worse for his rough usage. Among the most energetic of the party I thought I perceived Musa working away, and sure enough it was he, come to life again. After it was all over I asked him how his toe was, but he had forgotten all about it; either the ammonia or the excitement of getting out the horse, had effectually cured him.

In the morning our observation book was found; the head muleteer was, however, very ill with fever, so we had to make this spot our headquarters until 15th June, when he recovered sufficiently to move: it was astonishing how he would swallow strong doses down without their affecting him in the least. A sirocco wind was blowing at this time, when the heat was between 80° and 90° during the nights, and made us all very uncomfortable. In the survey of the country to the north of our camp nothing of importance was observed.

The village of Surah (the ancient Zorah) stands about 1150ft. above the sea, and is situated on the southern end of the hill crest overlooking the valley of the same name. On the opposite side of the valley low down is the ruin of 'Ain Shems (the ancient Bethshemesh), and from our stand-point it is easy to see the line which the milch kine would have taken in coming up from Ekron, and also the valley which the men would have ascended in carrying the ark up to Kirjath-jearim. Looking across the valley to the opposite crest we can see the ruin of Tibneh (the ancient Timnath), where dwelt Samson's betrothed; it is 740ft. above the sea, and therefore not in the plains, as some writers have stated. Samson in going down to it would descend 700ft. into the valley and then ascend again 350ft. to Timnath. It is apparent from the sacred narrative, Judges xv., that the corn was growing in the valley, as it does at present, with the vineyards and olives lining the side of the hills; for we are told that the Philistines *came up* to Timnath and burnt Samson's wife and her father with fire. Tibneh lies between El Bureij and Ammûrieh.

The hills about bear witness of there having been once an industrious race inhabiting these parts, but the words of King Solomon may apply to the present owners, "I went by the field of the slothful and by the vineyard of the man void of understanding: And, lo, it was all grown over with thorns, and nettles had covered the face thereof, and the stone wall thereof was broken down. Then I saw and considered it well; yet a little sleep, a little slumber, a little folding of the hands to sleep: so shall thy poverty come as one that travelleth, and thy want as an armed man."

Photograph No. 271 gives a view of the valley of Zorah, and No. 272 of a curious monument placed upon a hill one mile to the west of the village; the top stone is 6ft. long and 3ft. by 2ft., and has a groove 2ins. deep and 3 broad down the centre of each side—it appears to have been for a mill of some sort, probably for olives. The hill country commences to the east of 'Ain Shems, and the valley of Surah is seen no

longer, being broken up into the steep defiles of W. Ismail, Muttûk, al Balût, and others coming down from the hills; there are many ruins about the broken ground formed by the junction of these wâdies, and no doubt it was once densely populated. Many cut stones were found about of large size, which had been used as mills. In W. Muttûk, near Teshua, we found running water and a spring hard by, but it is soon absorbed by the thirsty soil.

Near Tantûrah there are the remains of a tower 30ft. square, of large squared stones. The ruins of 'Ain Shems extends many hundred yards east and west. The points were fixed independently by Lieut. Anderson and myself; in our longitude we differ somewhat, and in our latitude one-quarter of a minute (in my letter, 22nd Nov., 1867, printed in the *Times* and in the "Quarterly Report," this difference was given as four minutes, the one-quarter being turned into four.)

June 15. -We left 'Ain Shems 2.5 p.m., and arrived at a spring, Ben el Lemûn, at 2.45, and keeping to south arrived at Tibneh at 3.30. There are few vestiges here except caves in the rocks. Close to is El Bureij, where we arrived at 3.43. Passing from here west we were at Ammûrieh at 4.20 p.m., where there are the remains of a castle, and progressing to west, at 4.57 we came on Khubel Ferrad, where there are extensive ruins; keeping to west several observations were taken, until it became quite dark, and our guide brought us back over the hills to Beit Kalîf, 1200ft. This is a village of some importance at the present day, but is not mentioned in Scripture. We here experienced the difficulties of Eastern hospitalities; we had run out of bread, but were too numerous a party to sponge upon our neighbours, and the people absolutely refused to sell, as they considered it too degrading; our dragoman had to go from house to house and beg a loaf from each, which we found means to repay afterwards.

June 17.—Leaving Beit Kalîf at 6.45 a.m., we passed Neby Bulus and Telu Alia and Yarmuth (Jarmuch), where there are extensive ruins, and passing through wadies and marshes we ascended the hill of Keishûm (1150 feet), and leaving El Gîna to our right we traversed a range of hills bounding Wâdy Sumt to the north. On our way we met two old men, who assured us that the country belonged to the Christians —the constant repetition of this maxim sometimes appeared to be satirical.

11.5 a.m we passed Moghullis, and passing a quarry to the left arrived at Shukh Dand at noon; here we were (600ft.) on a projecting spur, 1½ miles due north of Tel es Safîyeh. From this, proceeding down to the plain due north, we came upon a very extensive ruin in the valley, called K. er Rassîm (foundations), and after examining the country arrived at Tel Takariyeh by sunset.

We were now in the valley of Elah, and from this point I surveyed the country to east and south. On 19th June examined the country about Um Burj, and found extensive Christian remains on the brows of hills, large lintels 6ft. long and 2ft. thick, with crosses, &c., sculptured

on them; the stone has a bell-like sound when struck, and is of soft mezzeh.

Near Um Burj is a cave or columbarium. On getting on the hog's-back, on which is the ruin Jedeideh, we appeared to be among ancient remains, but before this everything to-day seemed to be of the Christian period; arrived in evening at Tel Bulnard, two miles N.W. of Beil Jebrîn.

June 20.—Musa, who had gone up to Jerusalem for bread, arrived in an exhausted state, having been pursued by two mounted and four foot Bedouins; he had turned down Wády es Sumt and come over the hills, leaving his pursuers behind. We were engaged the whole day in examining the country up to Arak Menshiyeh, where we encamped. Here there is a strange mound of earth (see photograph No. 274), called the Arak, while the village is distant some 400 yards or so. This mound is triangular in plan, and appears to be of Assyrian origin: it would be very desirable to cut a hole through it and examine its contents.

June 21.—We passed down by Falagy, past the ruins of Eglon and Lakis, and villages of Bureir and Simsim to Nigid. Nothing remains to be described here after the account of Dr. Robinson. At Eglon we found Bedouins from the south, but one of them got his ears boxed by Capt. Phillips for venturing too close to his horse, and they did not bother us further.

June 22.—From Nigid I wished to take a straight cut east to Dwaime through the deserted hills south of Wády Hessy. A villager volunteered to accompany us, our baggage going round by the royal road, the distance in a straight line 18 miles. Leaving at 7.10 a.m. we saw from the top of the first eminence the ruins of Zeil, Bableyeh, Aran, and Beit Duas, on the hills above Simsim. Leaving this point at 7.45 a.m. we passed to east through hills of indurated shells, and leaving caves to our right arrived at K. Kums at 8.7 a.m.; left 8.10. Viewed Neby Hûd on W. Mehowreh 8.11, and at 8.22 came on K. Jelameh, a ruined site, 130 yards by 40 yards, with cisterns. At 9.10 a.m. we got down into W. Husy; a fantasia was here enacted for our benefit. Two Bedouins came up and robbed a camel driver, but we did not see the joke in the way it was intended. At 11.5 a.m. we arrived at Tel Hessy, an artificial mound to S.W. of Wády, elliptical N.W. to S.E.; water running in Wády; left 11.23. We now found a beautiful stream of brackish water in Wády Hessy, and turned south to Tel Nargîly. At 12.30 passed a hard clay threshing floor, and at 12.40 p.m, arrived at the Tel. Here there is a spring of fresh water welling out of the rocks in the midst of a salt and barren land. The Tel is artificial; a great deal of cut stone and concrete about, and graves on top; extensive ruins on all sides, but of no decided character. Left 1.10 p.m.; passed Arab camp, where they wished us to stop the night, and passing by some ruins and caves arrived at Dawaimeh at sunset.

June 24th —From the wely near this town observations could be taken to many of the most important points to the north. We left at

7·45 A.M. for Beit Ulla; and at 9.50 A.M. passed Tel ed Dewar, an oblong mound 50ft. high, close to the village of Lukbeibeh, one of those villages which the government have caused the Bedouins to establish. At 11.5 passed a crusaders' ruin, and at 11.45 arrived at Santa Hannah, close to Beit Jibrin, an artificial mound. I here broke the glass of my prismatic compass, and found the instrument useless for the remainder of the day. With the aid of a ruby, however, which I had purchased at Askalon, one of the photographic plates was cut down in the evening to the required size, and made to replace the broken glass.

June 25th.—Several ruins were examined, but nothing of importance. We encamped in the Wády es Sumt (the valley of Elah) under a large Butm tree, probably the largest in Palestine. See photograph No. 275. To give an instance of the adroitness of the Arabs I may mention a scene which took place here. On arriving at our tree, we found the cook and a fellah struggling violently, and each with a stone in his hand cracking into the other's head. After separating them I inquired the cause of the disturbance, and the cook said the fellah had kicked dust into the soup, but the man asserted that the wind had blown it in. They were both very violent in their movements, and the fellah accused the cook of having pulled his beard, and after several absurd gesticulations, he picked up a tuft of hair from the ground and showed us the place where it had been plucked from his chin. This of course was a very serious offence, only the cook denied having touched the man's beard. The dragoman at last came up, who soon settled the matter, for he recollected that the cook had just cut off some huge locks from his head, which the fellah had made use of by declaring they were part of his beard. On looking at him closely we found that his beard had never been touched, but it was one of those which do not grow luxuriantly just under the chin. The man had been rather badly cut about the head by the stone the cook had wielded, and was bleeding profusely, but he would not allow his wounds to be dressed, as then he said the sheikh of his village would not see how he had been treated, and he marched off indignantly to call on his friends to attack us during the night. We were just now in the track which the Bedouins use on their marauding expeditions, so we found ourselves threatened from two points; all we could do was to keep strict watch all night, and hope that the villagers would cross the Bedouins and keep clear of us. We awoke in the morning without any mishap, but not by any means due to our watchers, for on waking once near dawn, I found all snoring fast, and could not disturb them by sticks or stones.

Near this tree probably took place the combat between David and Goliath. Suwaikeh (the ancient Sokoh) is on the hills to the west by one mile. From here we made our way surveying to Beit Atab and Deir al Howa, both prominent points in the hills of Judea, 1790 and 1780ft. above the level of the sea. From here we observed to the points where we had observed from in the plains. June 28th we arrived in Jerusalem.

ON THE PRÆ-ISRAELITE POPULATION OF PALESTINE AND SYRIA, AND THE ASSIGNMENT OF ARCHAIC REMAINS.

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THE ethnological arrangement of the Canaanite population has been none the less obscure and the occasion of controversy because in the Mosaic record that population is embraced among the children of Ham.

Of the population we have no representatives in sculpture or picture, and no identifiable modern descendants. Language does not appear to help us, because the language is unrecognised. The few words in the Scriptures have not proved of any use. There are no monuments that give us assistance. The Moabite Stone belongs to a comparatively late period, when Semitism was predominant.

Under these circumstances a solution is to be attempted, which has been found practicable elsewhere, and that is the names of the places. Most of these, as we have them in the Bible, are Hebrew, and, consequently, afford no help, but there are terms which are not Hebrew. A safe class for such an essay is that of the names of rivers. These are ancient, and if they are not Canaanite, they will reveal to us some antecedent population. Names that we can take are—

Jordan.	Torna.
Kedron.	Bostrenus.
Orontes.	

To these a Hebrew interpretation cannot be attributed. It will be noticed that they all contain the radicals R D N.

We shall find these are the radicals of many ancient river names—

Rhodanus .... Gaul.	Iardenus .... Greece.
Rotanus .... Corsica.	Prytanis .... Asia Minor.
Eridanus .... Italy.	Parthenias .. Greece.
Triton ..... Crete.	Bradonus .... Italy.
Triton ..... Italy.	Vartanus .... Sarmatia.
Artanus .... Bythinia.	Dyardsnes.... India.
Drinus ..... Illyria.	Kartenus .... Mauritania.
Iardanus .... Crete.	

Of the form, D R N in Kedron, we have here—

Aternus ..... Italy.	Matrona ..... Gaul.
Tarnis ..... Gaul.	Saturnus..... Italy.
Duranius .... Gaul.	Liternus..... Italy.
Trinium ..... Italy.	Vatrenus .... Italy.
Matrinus .... Italy.	Vulturnus .... Italy.

Of the form, Orontes, we have only

Barentinus	Italy.

There is another form

Mæander.....	Caira.	Ætumander ..	Asia.
Skamander....	Mysia.	Alander	Phrygia.
Skamander....	Sicily.	Tarandrus	Phrygia.
Orumandrus ..	Cappadocia.	Akalandrus ..	Lubanias.

A fifth form gives

Tanarus	Italy.

The most casual observer can scarcely hold these forty examples to be casual, and the Semitic scholar will recognise among the prefixed consonants M T S.

The question may now be thus directed. Are there languages on the area which will afford a word that is conformable? There are such in the Caucasus, and in Georgian, Dinare, and Mdinare, signifying "River."

If this be a true test, then the other Caucasian words for river should conform to it. They include

Georgian and Mingrelian	Dinare.	Mingrelian	Tsqari.
Swan or Suan	Oruba.	Swan	Gangalitz.
Georgian	Pshani.	Swan	Veets.
		Ancient Phrygian.	Vedu.

These give the same forms with the various inversions of the root letters already seen in R D N, and with the same prefixes. Familiar examples are—Arabius, Iberus, Beris, Rhebas; Pison, Sobanus, Phasis, Nymphæus, Banes, Cyrus, Araxes, Akheron; Ganges, Kana, Naka, Bætis, Duba, Tava.

Of prefixes may be cited Marubius, Mekhara, Mogrus; Tiberis, Tigris, Tanazer, Sarabis, Siberis, Sangarius, Khaboras, Liparis, Lokra.

On this system to the root Gangal or Gangir are to be attributed the Kanah and the Lake Samakhonitis: the Abana and the Lake Baneas; Euphrates, Keprates, and, possibly, Kaprusa.

Of these it would be easy to give analogous examples from other sources, but having sufficient instances to identify Kanah, as a river form, and which is explained by Ganga, it is useful to refer to the lake name Samakhonitis, recorded by Josephus. This head lake of the Jordan is marked as receiving *three* rivers and springs. *Three* in Georgian and Swan is Sami (conforming to the main Tibetan and Chinese group), and Sami Gangalitz would mean in Swan, Three Rivers. This instance goes beyond the casual.

The Arnon conforms with Arno, Rhenus, and other well known types, and so do many other of the names of the Syrian region conform to external types belonging to a homogeneous class.

Certain it is that the languages of the Caucasus, belonging strictly

to the Georgian branches, have relation to one ancient language, which I have denominated the Palæogeorgian or Palæoasontic, in which were formed the oldest geographical names of rivers, islands, countries, mountains, volcanic regions, metalliferous sites, and cities.

In the same way that several roots form what may be called "river" names, so there are several transposable roots used for "fire" names. These names are applied to volcanoes, mountains, volcanic countries, and some cities. They include the well known names of Moloch and Baal, and are referable to Caucasian roots for light, fire, flame, sun, day, &c. All are founded on one mythological system.

With such names as Ebal, Gilboa, Libanus, Thabor, Atabyrius, Abarim, Peor, Hebron, will be found to be allied Abila and Kalpe, Olumpos, Alpes, Sipylus, Pyrenœi, and a vast group, widely distributed over the same regions as the "river" names.

While to so many countries "river" names are given, as Sardinia, Dardania, Mauritania, Britannia, Europa, Arabia, Iberia (2) Hibernia, Kupros, Umbria, &c., we find such fire names as Italia, Sicilia (Sikilia), Cilicis (Kilikis), Apulia, Lipari, Melita, Mitulene, Thule, Ætna, Vesuvius, Khimæra, Asphaltites, &c. &c.

The fire and water names again bring us in contact with a large group of names in comparative mythology such as Moloch, Milkom, Mulciber, Vulkan, Baal, Apollo, Pallas, Pollux, Cybele, Athene, Hephaistos, Vesta, Castor, the Dioskeuroi, Saturnus, Poseidon, Nereus, Triton, the Nymphs, and many others, representing nature worship.

The means of conciliating the linguistic phænomena are afforded by the Caucasian languages in their modern and ancient forms, including the materials available in Phrygian, Lydian, Carian, Lycian, Thracian, and Etruscan. The means of conciliating the ethnological affinities are afforded by the Mosaic record, when properly understood, and by the facts of comparative mythology recorded there and elsewhere.

If we set aside the false interpretation of Cush introduced in the Septuagint as Ethiopia, then we reject Ethiopia from the scheme of Paradise and of the Tholedoth, and in the latter we recognise among the children of Ham not African races, but the Tibeto-Caucasian, and among these the Canaanites as a branch. We thus get a harmony of the Mosaic record illustrated by the canon of archaic history here restored, and to be further illustrated when the subject comes to be discussed.

Under this interpretation we find Syria and Palestine conquered and occupied by the races which should occupy them when the adjoining region and the whole western world, from the Asian frontier to the Atlantic, was occupied by one great empire or succession of kingdoms using the same language. This explanation gives us a better view of the circumstances of the Israelite invasion, and what we may look for in præ-Israelite investigations in Palestine and Syria.

In a practical point of view we get another standard to enable us to judge of the probable antiquity of sites, because if the name indicates a

Tibeto-Caucasian or Canaanite connexion, we may look for earlier remains in deeper excavations.

To apply this test successfully we must observe what was the condition or relative development of the Palæogeorgian language, as used by the Canaanites and their kindred. It is evident it had not reached the state of fixity of the Hebrew and its congeners, nor the same stage of advancement. All the Georgian languages are now fixed languages in comparative grammar; but the Palæogeorgian belongs to the earlier stage, when there were several types of the same root, and when the radical letters were susceptible of permutation at will. As the Hebrew is a language highly developed, it is consequently relatively later than a language in a less advanced condition.

With regard to the Palæogeorgian in the case of Dinare, the D and N represent water, and the R gives the idea of flowing or running, but it was indifferent to the Canaanite where he placed the R, at the beginning, middle, or end, and the other letters were similarly permuted. In Jordan it is in the beginning, in Kedron and Orontes in the middle. In Arnon we get an exemplification of another property, for the R of the same type is worked with only one letter of the root for water, DN or ND.

These properties of the language, while in the mass they afford characteristics for determination, yet in the case of an individual word in our present state of knowledge, they expose us to possible difficulty. There is little apparent difference between the "Fire" term Tabor and the "River" term Tiber (probably Tibur).

It was perhaps such properties in the Palæogeorgian language, of which we find traces even in early Hebrew, which, in the schools of Babylon and Nineveh, were developed in the dual system, and afterwards in the form of the Cabbala were made to react on Hebrew thought and Hebrew composition. Among the Caucaso-Tibetans we have such carefully selected pairs as Abila and Kalpe, Kastor and Pollux, Sardinia and Corsica, Britannia and Hibernia, Scilla and Charybdis. We have the germs of an organised dual system.

The area of the Caucaso-Tibetan migration, so far as determined by the local names, reaches from furthest India to the Atlantic. It embraces consequently the whole range of megalithic monuments, which in the west have been so fancifully assigned as Druidic. On this area, near the point at which the Caucaso-Tibetan race probably descended from Thibet, we find a living race, that of the Khasias, engaged in the building of megalithic structures in our times. We thus again get a concord of facts. The Celtic theory, or any other, does not cover the area of the monuments, but in the case now assigned, the whole area of such monuments can be assigned, and we bring into connection the old and new monuments of India, of Persia, Palestine, the Caucasus, North Africa, Gaul, and Britain. A migration of various tribes, headed by a leading race, would bring with it monument-builders and metal-workers, and many rude races exercising arts, which have been commonly regarded as denoting high civilisation.

The facts here brought forward give a new interest to exploration in Palestine and Syria, for they may enable us to determine many ancient monuments and works of art, as also to account for phenomena of population. With the help of the Biblical record they will give us a far better and safer view of comparative mythology, previous to the Aryan period, than we have yet obtained. What were chance conjectures of men of learning will, in many cases, be converted into ascertained facts. It is within compass that we may, in the countries referred to, find characters or inscriptions, far older than the Moabite, in a cuneiform letter and Caucaso-Tibetan language.

The statements here made already rest on the testimony of numerous facts, but they are so new that there has not been time for their full development. When the strangeness of them has passed away, and instead of looking for a Scythian language without the means of interpretation, we begin to avail ourselves of the neglected languages of the Caucasus, for which we have liberal materials, then the Bible, and the scenes of its events, will become of the greater interest and value in throwing a new and clear light on that obscure and remote epoch of the western world between three thousand and four thousand years ago, which has as yet wanted a history. In return the Bible will receive further and safer illustrations, in addition to those as yet obtained.

LETTER FROM DR. CHAPLIN.*

"A few days ago I received a visit from Herr Victor zur Helle, of Vienna, who informed me that he had been able to enter the hitherto unexplored southern passage of the 'Ain es-Shefa, and had followed it to its termination, 96ft. from its commencement. He had lost his compass in the water, and consequently could not be certain of the exact direction of the passage, but believed it to be south-west. As the water is seldom so low as to admit of an examination of this canal, and the winter rains, which are now anxiously looked for, may soon close it again, I took the earliest opportunity of descending, and the following are the notes of my observations:—

"The descent was made on the 29th of November, 1870. The passage commences at the southern end of the western wall of the basin. It runs 43ft. 6in. in a direction S. 84 W., 13ft. 5in. S. 80 W., 5ft. 4in. S. 1 W., 12ft. 6in. S. 65 W., and, lastly, 27ft. 6in. S. 4 E., its entire length being about 102ft. At its termination it is blocked up by fallen, or most irregularly constructed, masonry, and has no basin. A stick could be thrust in under the blocks of stone for about 3ft., but no continuation of the passage could be made out. The floor slopes towards each end, the highest part being about the middle. At the entrance,

* This and the following paper are reprinted from the *Athenæum* by kind permission of the editor.

and for some 20ft. beyond, the water was a little over knee-deep; to the middle the passage was nearly dry, and at the further extremity the water reached 6 or 8in. above the knees. The canal is 4ft. high and 3ft. broad at the entrance, and of about the same dimensions throughout, except where narrowed by fallen masonry, or widened or made higher by the disappearance of the walls or roof. Only at one spot was there any difficulty in passing. The walls are of rough masonry, some of the stones being of large size. The roof, where perfect, is of thick broad blocks of limestone, laid across. No arches, columns, or ornamented stones were observed. The rock could not be detected anywhere, though it is possible that it may in some places form the floor. Plaster still covers portions of the sides and floor, but the passage is in a very ruinous condition. Water was observed trickling down from between the stones of the southern wall, at a spot not far from the entrance, and the sides and roof were in some places very wet, in others nearly dry. No appearance of a fountain was discovered, though carefully searched for.

"Advantage was taken of the low state of the water to examine the basin somewhat more minutely than has (I believe) hitherto been possible. It was found to measure, from north to south, in the middle, 11ft. 9in.; from east to west, in the middle, 6ft. 6in.; from east to west, opposite the entrance to the lower passage, 5ft. 10in. The floor is of rock at the northern part; how far the rock extends to the south could not be ascertained in consequence of the depth of the water. The walls are everywhere of rough irregular masonry. Plaster still remains on the northern and southern sides; that on the latter being continuous with that of the lower passage. The plastered surface on the northern side extends farther to the east and west than the side walls which abut upon it. The plaster is made with small white stones, instead of the usual pounded pottery. Water was trickling in a rather copious stream from under the masonry on the east side of the northern passage at its termination, and it was observed that here the masonry rests upon plaster, from between which and the stones the water was running. Further north, also in this passage, the walls rest upon a plastered surface.

"It can hardly, perhaps, be said that the mystery which has attached to this remarkable well is even now entirely removed; yet every fresh observation tends to confirm the opinion that *its water is derived solely from the percolation of the rains through the débris upon which the city is built*. There is no evidence to show that it proceeded originally from a subterranean source; and it is not likely that, if a fountain had existed here in ancient times, it could have escaped mention by either the sacred or profane writers. Probably there was formerly a pool near this situation, into which the water coming down the valley (which drains a large extent of surface) was carefully conducted. After the destruction of the city and the consequent filling up of the pool, the water would still find its way down to the same spot, and either well up

to the surface or be reached by means of a shaft. As the level of the city continued to rise, a longer shaft would be required, and thus in the course of ages what was at first a superficial collection of water would become converted into a deep well. "THO. CHAPLIN, M.D."

The following is an extract from Captain Wilson's "Notes on the Ordnance Survey of Jerusalem":—

"The es-Shefa well supplies the Turkish baths in the old cotton market. From the bottom of the shaft a channel, cut in the rock, and vaulted with masonry, leads down in a southerly direction to a small cave or basin, from which the water is obtained in summer by a man who descends for the purpose. No leakage was visible at the sides of passage; but the greater portion of the water probably passes through the deep rubbish above, and thus acquires the peculiar Siloam flavour. The supply and quality cannot well be improved."—*Notes*, p. 85. Plate XXII.

NOTES ON CERTAIN NEW DISCOVERIES AT JERUSALEM.

By M. CLERMONT-GANNEAU.

(1.) *Hebrew inscription in Phœnician characters.*—This inscription, discovered by myself several months ago, is the only monumental text which goes back to the time of the kings of Judah. It belongs authentically, by the very position which it occupies, to the history of Jerusalem. I cannot yet publicly point out its origin, in order not to interfere with the steps taken for its preservation. I will confine myself to saying that it has probably a religious signification, as is proved by the words *beit* and *Baal*, which are very distinctly to be read.

(2.) *Roman inscription.*—This text is the second which has been found up to the present date, belonging to the Roman occupation of Jerusalem—the first being the votive inscription of Antoninus, built into the southern wall of the Haram. It came to light in the demolition of an old building; unfortunately it is incomplete. We read only the following:—

LEG· X· FR·
LIUS · SABINUS
NA · PRINCEPS
VSDEM · D · D·

It is a dedication made by a *centurio princeps* of the Tenth Legion (fretensis), named (Ju?) lius Sabinus, to another officer, probably superior in grade, belonging to the same legion, whose name is wanting. The interest of the text depends principally on the fact that the

Tenth Legion formed part of the army which besieged the city under Titus. We know, from Josephus, that this same legion had been left as a garrison of the conquered city; probably it continued there under Hadrian and his successors. The form of the letters would seem to fix the time of the inscription to about the reign of Caracalla.

(3.) *Fragment of vase with Hebrew Phœnician characters.*—This fragment, picked up in one of the valleys which surround Jerusalem, by a French traveller, M. Maurice Vernes, is of a rather soft limestone. On the convex face can be distinguished elegant mouldings and fluting; it is even possible, following the plan of ornamentation and the curve, to restore the vase to its primitive dimensions and form; it would exactly resemble the vases on Asamonean coins. On the concave face are traced several signs which appear to have a numerical value, and a *Khet* perfectly clear in the Phœnician form. I think it must be the initial of the word *Khomer*, the name of a measure; the numerical signs probably indicate certain fractions of a *Khomer*. The vessel thus bearing the official stamp of its exact measure must have been used for religious or commercial purposes; the ornamentation of the vase and the use of the archaic character would incline us to the former hypothesis; we know besides that the Jewish ritual required for certain sacrifices offerings exactly measured.

(4.) *Greek inscriptions in the so-called Tomb of the Prophets.*—I have discovered in this curious crypt, under the stucco which covers the walls, a dozen or so of Greek Christian inscriptions, real *graffiti*. The greater part are proper names. With the patronymic twice occurs the formula ΕΝΘΑΔΕ ΚΙΤΕ (*sic*) = here lies, and ΘΑΡCΙ (*sic*) ΟΥΔΕΙC ΑΘΑΝΑΤΟC, *courage, no one is immortal.*

The inscriptions are, almost without exception, each over a *loculus*, and evidently indicate the name of the person buried therein. The crosses which accompany them all leave no doubt as to the religion professed by the dead. As to the date of the inscriptions, the presence of the cross and the form of the letters permit us to assign them to a period as far back as the first year of official Christianity, that is to say, not far from Constantine. This crypt probably served as a cemetery to some one of the numerous monasteries founded quite early in the Mount of Olives. It may be remarked that our epitaph contains the names of both men and women. We must, therefore, conclude that what is generally known as the Tomb of the Prophets was, about the fourth or fifth century of our era, a Christian crypt. And if we want to place here Josephus's *Peristereon*, we must at least admit that the monument has undergone modifications of a later date.

(5.) *Ancient Jewish sarcophagus.*—I had always been struck by the singular appearance of an angel, carved of a hard, reddish-coloured stone, serving as reservoir to a pretty Moorish fountain in the street of the valley (Hà'rt el Wàd) near the Bab El Kattanin. On the anterior face, the only one visible, were three discs in relief, reminding one exactly of those on the sarcophagus discovered at the "Tomb of the

Kings," by M. de Saulcy. With the authorization of Khamil Pasha, I had the sculpture taken down, and was enabled to ascertain that it is really a sarcophagus. The posterior face, adhering to the wall, was in a much better state of preservation than the anterior. I observed there also three discs in relief, but I looked in vain for the inscription which I hoped to find there. Two other discs were engraved in relief on the two extremities; that at the end for the head was slightly concave and had a small button in the centre. This sarcophagus, unfortunately anonymous, is certainly contemporaneous with that which contained the remains of the Queen Sudan. Perhaps the inscription which I hoped to find was on the cover which has disappeared.

(6.) *The tomb of Absalom cleared out.*—Excavations made by me at the western face of this curious monument, on which opinions are so much divided, have enabled me to discover the base and pedestal of the columns, which are, according to the mouldings, purely Greek; the bases rest on a pedestal of 0·80 metres in height, supported, in its turn, by a kind of plinth (*socle*) more than a metre in height. Further, I have completely cleared out the interior of the central chamber, which was almost filled up by the stones thrown in from time immemorial. I have thus exposed to light the two funnel arcades surmounting the slabs in which were placed the sarcophagi. Three high steps cut in the rock and connected with three other steps above them enabled me to reach the original door of this monument, situated above the cornice. I have found another door, more modern, consisting of a horizontal passage in a level with the chamber, and opening to the exterior, at half the height of the monument.

This chamber has evidently been transformed at a certain time into a place of residence, as is proved by perforations irregularly made in the walls, to admit the air and light, as well as the construction of a new door. These excavations allow me to arrive at the following three important facts:—1. The height, the proportion, and the true aspect of the monument; 2. A proof that the ornamentation is in Greek style; 3. The presumption that the chamber is of earlier date than the ornamentation; thus it is probable that originally a subterranean cave had been cut into the bed of the rock, into which one descended by six steps; later on this cave was isolated by these low and deep cuttings, so as to be transformed into an edifice, and the first door, opening into space, was thus generally, but wrongly, supposed to be a window.

(7.) *Stone of Bohan.*—I think I have discovered, topographically and etymologically, the exact position of this point, of the greatest importance for the direction of the frontier line of Benjamin and Judah. The stone of Bohan, or Bohen, *stone of the thumb*, is nothing else than the *hajar-el-asbah* of the Bedouins—stone of the finger—not far from the place where the Wády Daber enters into the narrow plain which separates it from the Dead Sea. The style of Bohan, as son of Reuben, rests on a very old copyist's error, the cause of which I think I have found and proved in a *mémoire* addressed to the Institute; political events have at present prevented its publication.

(8.) *Pool of Strouthion.*—About two years ago we explored for the first time, Captain Warren and myself, the new tunnel parallel to that which had been discovered under the establishment of the Sisters of Sion some years before. The presence of rock, ascertained in several places, led us to believe that we were examining a large cistern half cut out of the rock, and half covered by two long vaults. Subsequent examination has entirely confirmed this theory, and has proved that at this place existed an ancient pool or *birket*, forming a long parallelogram, cut in the rock, open to the sky, having a mean depth of four to five metres. I have ascertained, by sight and touch, the existence of the rock cut vertically along nearly the whole perimeter of the parallelogram. At a later epoch the reservoir was covered by the two long tunnels at present existing, in order to prevent the evaporation of the water by converting an open into a closed reservoir. The intermediate wall on which the double vault rests, is pierced by six large semicircular arches, forming a means of inter-communication for the two tunnels.

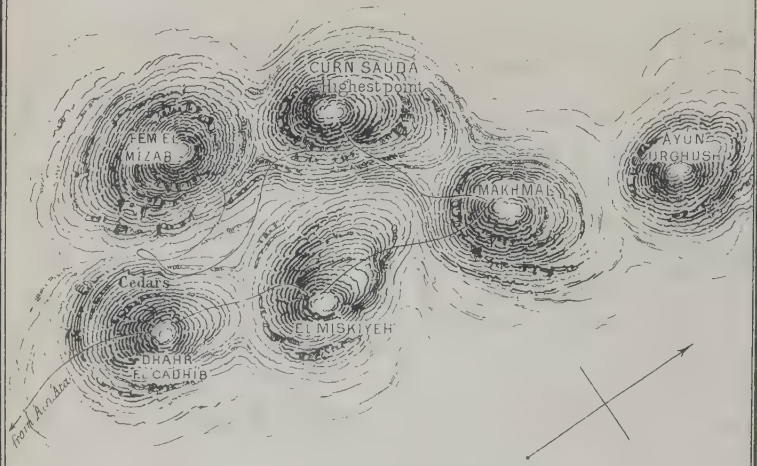
This reservoir, lying in a direction N.W. and S.E. measured about 53 metres long and 15 broad. At its south-east extremity it abuts against the rock on which rose the fortress of Antonia (the present barracks). Here is evidently the pool *Strouthion*, which it has been sought to identify with the *Birket-Israïl*, or in an imaginary prolongation of it, in spite of the impossibility of taking account in this theory of the plan of attack by Titus against Antonia as given by Josephus. On the other hand my explanation makes everything clear and conformable to the rules of strategy. Titus evidently attacked the N.W. angle of Antonia; with this object he established an *agger* on the left of the pool *Strouthion*, and against the middle of one of its long sides; then at some distance, about the middle of the pool, a second *agger*, commanding the western side of the N.W. angle of the fortress.

The comparative smallness of this pool, reserved, probably, for the wants of the fortress (Baris Antonia), might even partly account for the name *Strouthion*, which means in its simplest, and, therefore, most probable sense, a sparrow, the sparrow's pool, that is to say, the little pool, by a sort of popular *sobriquet*.

Archæological and historical considerations seem to demonstrate that the transformation of the pool Strouthion into a closed reservoir belongs to the period of Œlia Capitolina; the splendid stone-work above the double tunnel and extending as far as the Ecce Homo Arch must be contemporary; the arch itself is probably a triumphal arch erected in commemoration of the decisive victory of the Romans over Bar Cochebas.

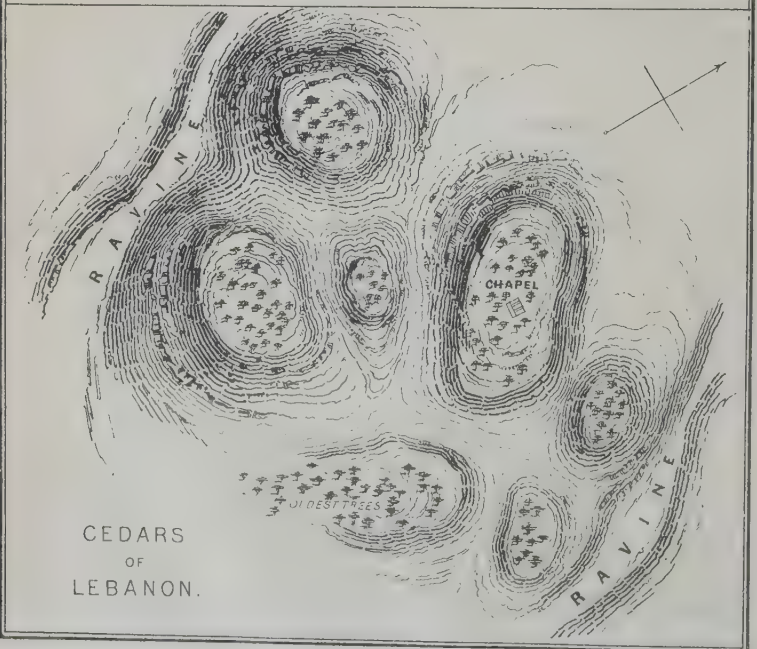
(9.) *Bahurim.*—This locality, celebrated by the passage of David when he fled before the victorious insurrection of Absalom, must be situated somewhere near the Mount of Olives. The different identifications hitherto proposed rest only on purely gratuitous assumptions. There is, however, a point discovered by myself which, topographically and etymologically, may very much better be considered the Biblical Bahu-

ROUGH DIAGRAM OF THE SUMMIT OF LEBANON.



Heights.	Aneroid	Therm.
Dhahr el Cadhîb	20.30	53°
El Miskiyeh	20 20	75°
Makhmal	20. 20	63°
Curn Saudá	20. 20	75°
Cedars	23.00	78°.30'

Times	h.	m.
Ain Ata to top of pass	1.	30
Pass to Dhahr el Cadhîb	1.	25
Dhahr el Cadhîb to Miskiyeh		30
Miskiyeh to Makhmal		15
Makhmal to Curn Saudá	2.	00
Back to Dhahr el Cadhîb	2	45
Descent	1.	00
Cedars		20



Stanford's Geog.l Estab.t London.

rim. It is a locality, uninhabited, situated between the Mount of Olives, Siloam, Bethany, and Abou Dis, and called by the fellahîn *Aheil't fakhoury*. *Fakhoury* corresponds letter for letter to Bahurim, without the plural termination.

NOTES OF A TOUR IN THE LEBANON.

By E. H. Palmer, M.A.

On Tuesday, July 19th, 1870, we left Damascus, and passing out of the city by the west gate enjoyed the beautiful view from the little *weli* called Cubbet es Siyár; a rather uninteresting ride past the village of Dammár (the residence of the celebrated 'Abd-el-Cader), and down Wády Bassíni, brought us at last to 'Ain Fíjeh, one of the most beautiful spots in Syria. Here a broad rushing stream flows through a richly wooded valley with steep rocky sides; this is the Baradeh and 'Ain Fíjeh, its principal source flows, or rather rushes, out of a cavern westward, but immediately takes a turn and flows eastwards down the valley. Hard by the spring is a large ruined temple, probably dedicated to the nymph or goddess of the river. A short distance further on is Deir el Mokarram, a village containing some extensive ruins, and the tomb of a *weli* or saint, called Sheikh Helál, whose name, "New Moon," reminds us of that Sabæan worship which was once the established religion of the land; and a short ride past el Kufr and Ekfeir Zeit brought us at last to Súk Wády Baradeh. Here are numerous ancient tombs cut in the rock, in several of which the remains of busts and full length figures (apparently Roman from the dress) may still be traced. A path has been cut out in the solid rock, and on the walls of this are found two Latin inscriptions, one recounting the fact that the road was reconstructed by the Emperor Marcus Aurelius Antoninus, the same whose name is inscribed to record a like work at the Dog River. A fine aqueduct also runs along the face of the cliff. There is an Arabic inscription also on a rock at Súk Wády Baradeh—it is illegible, but is written in the Neskhi, and not in the Cufic character, as Porter says. The ancient name of the place was Abila; and this has given rise to the Muslim tradition that it is the spot where Abel was buried, and his tomb is still pointed out to the faithful. Up to this point the valley runs between lofty hills, the sides of which are covered with trees, and a broad river flows along its bed; after Abila, however, it widens out into a broad spoon-shaped space which might almost be called a plain; from this a splendid view of Hermon is obtained; at the right hand extremity lies the village of Zebedání completely buried in trees; and, higher up on the hill, Blúdán. Having pitched our tent at the spring of Zebedání we rode up to Blúdán and called upon Captain Burton, the learned and indefatigable English Consul, who received us very kindly and insisted

upon our stopping at his house for the night. The next morning we all rode out before breakfast to visit some caves at Zebedání; they proved to be rock-cut tombs, and over one of these were three busts in *bas-relief* and a Latin inscription, of which, however, only the first word, Deus, was legible. Captain Burton having himself made preparations for a semi-official tour in the Lebanon, arranged to accompany us, and we accordingly set out together, accompanied by some native horsemen, retainers of the Sheikh of Zebedání. Passing by the villages of Ghabteh, 'Ain el Húl, Sarghâyeh, Yahfúfeh, and 'Ain Tardeh, we reached Nebi Shíth, the traditional burial-place of Seth, the son of Adam. The tomb is a hundred feet in length and of the ordinary Muslim pattern, set upon a raised pavement or dais with two steps. From hence we rode for a short distance past the village of Khareibeh, where we were hospitably entertained by Mr. and Mrs. Rattery, English settlers in Syria, and made for Nebi Hám. Here, according to the Mohammedan tradition, Ham, the son of Noah, is buried; being a prophet of rather questionable character, his tomb has been neglected and is now in very bad repair. On measuring his tomb we found that the father of the Canaanites was only nine feet long; the sanctity of Mohammedan prophets is always measured by their height. At this village we camped for the night, the sheikh providing us with an excellent repast. Having noticed from Sarghâyeh an ancient fort situated on the neighbouring hills, we determined to visit it the next morning, and after a tedious climb succeeded in reaching the spot. It is called Casr el Benát, and lies due south of the cedars of Lebanon, occupying a commanding situation between two valleys. At the bottom of the hill on which it stands runs Wády Márabún, and close by is the village of the same name. The aneroid on the fort read 24° 42′ with the thermometer at 77° Fahr.

About mid-day we returned to camp, and having had lunch and a short siesta, started for Baalbekk, which we reached at about five o'clock, having emerged upon the plain by a valley called Wady Esbát. Najíb Bey, the governor of Baalbekk, a friend of Captain Burton's, here came out to meet him. At Nebí Hám we had been joined by Mr. Barker, engineer to the Wálí, who accompanied us here to ascertain if it were possible to carry out a project of Captain Burton's, namely, the demolition of a wall which hides the fine proportions of the Temple of Jupiter, as well as the removal of some unsightly stones on the top of one of the beautiful cornices of the same building. These had both been raised by Fakhr en dín Ma'án, the celebrated Druze chieftain, who had turned the place into a fort. Baalbekk is entered by one of the underground passages which form part of the substructures on which the platform of the great temple is raised. In these the lower courses of masonry are composed of huge stones, and apparently belong to the Phœnician period, while the upper part is late Roman. In the morning we went round to look at the ruins and get a general idea of them as a whole. We first inspected the famous great stones; they are

of immense size, being at least 60 or 70 feet long, and were placed by the Phœnicians apparently as the beginning of a temple, the design of which was never completed. The late Greek architects have used them as the foundation of their larger temple, that now known as the Temple of the Sun. On one very large stone beneath an ancient window I noticed the Phœnician letter *aleph*.

The town of Baalbekk is of considerable extent, and the water supply large; the principal spring is at Rás el 'Aín, situated just outside the town to the east. The position of the town on the edge of the fertile plain of Buka'a is one of the finest in Syria, and were commercial facilities extended to the neighbourhood by the opening of the long talked of Euphrates railway, Baalbekk would undoubtedly soon regain its ancient prosperity and importance. Our tents were pitched in the centre of the ruins, or rather of the courtyard of the larger temple.

The temple of Jupiter is in beautiful preservation, though many of the columns have been overthrown and broken by earthquakes. The ceiling of the outer colonnade is magnificent, being formed of huge blocks of stone, on which are carved elaborate patterns consisting of Solomon's seals and triangles interwoven one in the other; in the centre of each of these patterns is a large bust, smaller ones are placed round it, and intricate foliage fills the intermediate spaces. The whole effect is fine, though the intercolumniation is in rather bad taste, the pillars being placed only 9 feet apart while their diameter is 6 feet, whereas the canon of architecture decides that one and a half diameter is the least allowable distance. All the work, though very elaborate, is debased Roman. In the courtyard, where our tents were pitched, the walls are covered with niches in which statues formerly stood, these are called by the Mohammedans *miḥárib*, and are evidently the models from which the latter took the form of their *miḥráb* or prayer niche. The entrance to the Temple of Jupiter has been profusely ornamented; on one side is seen a *bas-relief* of a winged figure standing by an altar, to which a bull and sheep are being led for sacrifice. The key-stone of the gateway has partially dropped through; it has on it a *bas-relief* of an eagle with a winged figure on one side trailing a garland of flowers and fruit, the other side is obliterated. Beneath the temple is a vaulted chamber where "the French" are said to have discovered some treasure, an iron box full of coins.

Many of the carvings are as fresh as though they had been done but yesterday; one of them, a fallen capital about 13 feet square, shows the enormous scale on which the work was executed. Most of the columns are made of limestone, but there are also several composed of a coarse hard granite. In the centre of the courtyard are the foundations of a large building, and to the south is a large hexagonal court, and beyond that an esplanade, now, however, blocked up with modern walls. Up this the great staircase from the east appears to have led. At each end of the esplanade is a tower.

The entrance (for horses) to the building is through the arched tunnel

before spoken of; on the roof of this is an inscription. Some busts and a figure of Ashtaroth, with the crescent moon on her head, also adorn the ceiling. Another cross tunnel leads to a parallel one, at the east end of which is an inscription on the ceiling similar to that just described. At the north-west corner of the cross tunnel there are traces of what may have been a Phœnician inscription, but it is now so effaced as to be quite illegible. Between the two temples the remains of a covered passage may also be discerned. On the side of the tunnel to the south, are several chambers and an entrance, now walled up; on the outside of this two square pillars. We lunched in the portico of the Temple of Jupiter, and in the afternoon Mrs. Burton received a visit from some native ladies.

After this we paid a visit to the governor, Najíb Bey (a very intelligent and agreeable Kurdish gentlemen), to Habíb Effendi, Asâd Effendi Mutrán, Rafá'í Effendi Mutrán, some Maronite priests, and Ibrahím Effendi Jubbúr. All these, the gentry of Baalbekk, seemed to be extremely well off, their houses being well appointed, and an air of substantial comfort reigning throughout them. The Syrians, indeed, are a wealthy people; for instance, at Sargháyeh, where we had lunched a few days previously, the sheikh, a petty village chief, had been able to borrow the sum of 4000 napoleons to lay out in cultivating his fields. So many visits all at once entailed an amount of sweetmeats, sherbet, coffee, and narghilehs, which threatened entirely and for ever to ruin our digestion.

In the morning we walked up the hill to the south-east, and visited the ruined tomb or mosque of sheikh 'Abdallah, near which is the Cubbet Suleimán. From that we descended to the quarry in which is the enormous stone called the Hajjar el Hebla, or Pregnant stone, an immense block designed for the substructures of the neighbouring temple, but never removed from the quarry; it measures 73ft. in length. The upper part and sides have been dressed, but the bottom still adheres to the living rock. It seems impossible that it should have ever been contemplated to move such an enormous mass, but some of those actually built into the old wall of the Temple of the Sun are even larger. We next came down into the plain itself, visiting the Cubbet Már Eliás, a wall formed of huge pieces of granite columns, taken from some earlier building. Returning to the ruins we lunched in the old fort of Fakhr ed dín Ma'án, and later in the day went out into the town. Amongst the objects of interest which we visited were, first, the old mosque, where are some fine ruined granite columns and one piece of porphyry, which (although the natives declare that it comes from Egypt) Captain Burton has discovered on the French road near Sahl el Jedeideh. Secondly, we inspected a large female figure sculptured in marble, seated in a chair, with a sphynx on her left hand—the proportions and execution of this figure are decidedly bad. Thirdly, we proceeded to the little temple called by the natives El Cadíseh Barbára, Sta. Barbára; the interior is circular in shape and the work very pretty,

though debased Roman in style. In the evening we dined with the governor, Najíb Bey, who gave us a capital dinner, consisting of about thirty courses. The next day we started off at 5.30 a.m., and after two-and-a-half hours' walking reached the 'Ain el Baradeh, which is the highest source of the Litání; it forms a pleasant pool at the foot of a mound called Tell el Baradah, the earth of which has evidently been the site of an ancient village. At this point is the watershed of the Buka'a; the 'Ain el Baradeh, flowing down to the Litání southwards, while another fountain about a mile distant flows down to the 'Así. The turf above the 'Ain Baradeh is called Marjat es Sahan, and immediately above this is the Marj Baradah, in which is the Neb'a N'aaneh, a spring which flows down into the Litání. Here we found a large encampment of Turkomans, consisting of fifty or sixty tents; they are a well-to-do tribe, and are much better dressed than other nomad peoples. The women especially are distinguished from Bedawín females by wearing trowsers and red robes. Just before coming upon them we passed an encampment of the Wuled Abu 'Eid Arabs, and a little village called Hosh Baradeh. The second of the two springs mentioned above, viz., that of the 'Así, is called Neb'a el 'Elleh. In front of it is a Tell called Mugharr Saídeh, and further to the left another called Tell el Jab'a. The mountain at the foot of Lebanon, and just above the Neb'a el 'Elleh, is named Sha'arat Baalbekk. We returned home across the plain, taking, however, a more northerly course, and passed upon our way Neb'a Hosh ed Deheb, Neba el Caddús (the largest of the springs), all of which flow into the 'Así. We re-entered Baalbekk by the old wall of the town near the Cadíseh (St.) Barbara; behind this is a ruined mosque called Jam'i 'es Sághah, "The Silversmith's Mosque;" the earth here is like that of the part of Palmyra, where the metal worker's quarter is said to have stood—whence the name of the mosque. We ourselves found several pieces of slag on the spot. Passing through the town we came to the Rás el 'Ain, the great spring which feeds the water of Baalbekk. The spring is deliciously cool and clear, and in the centre of the pool which it forms is a large stone, a broken column with a capital. Beside the pool stands a mosque now in ruins, which an inscription tells us was built by order of the then governor by a Greek architect in the year 670 A.H. Above the pool is a square building called Cubbet es Sath, and another Cubbeh, above the town, immediately behind the governor's house, is called Cubbet el Amjad. The latter is said to be the tomb of El Amjed, son of the celebrated El Melek ed Dháhir. From this point the large extent of ground occupied by the old town of Baalbekk is plainly distinguishable. The old walls may still be traced, and two of the gates, the Buwábet Hums and Buwábet Makneh, still remain. Apropos of this I may mention that gates of Eastern towns are almost invariably named from the first large or important town in the direction of which they face. Rising long before sunrise on the following morning we set off and rode up the hill to the fountain called 'Ain Lujúj, keeping beside

the rock-hewn aqueduct which is said to supply every alternate five days Baalbekk and Nahleh; the spring is situated high up the valley, and the water issues from a small vaulted tunnel. About twenty-five yards from this is the mouth of a well communicating with the tunnel, and an old Syrian who accompanied us declared that he had been all along it till he reached a flight of steps, down which the water passed through an iron door, too narrow, however, for him to enter. On the north side of the wády are traces of a ruined aqueduct, leading directly from the spring. Descending the valley on our return we rode across the Buk'aa to visit a column which stands in the centre of the plain. It is a Roman memorial column, and is now called Camú' 'Aiyád, from the name 'Eiyád, of the owner of the adjacent fields. It is a solitary column, made of limestone, and about 50ft. high, with a capital and a pedestal of four steps. About 20ft. up on the north-east side there has been an inscription, but the tablet is now gone. From this point we rode into 'Ain Lebweh, a large and abundant spring, so embanked as to flow out into four channels on different levels. That to the east is said to supply Tadmor, and it really does go as far as El Ká'ah, a village some thirteen or fourteen miles distant, where all the water is made use of for purposes of irrigation. At 3 o'clock p.m. we reached the village of Lebweh, passing Makneh and Yuhnín on the night; the latter is the residence of Husein Za'íb, sheikh of the Mutáweleh; on the left we passed two other villages, the lower named Sh'at and the upper Nebhá. At Lebweh we stopped to lunch, and after a short siesta rode on past El 'Ain and Fíkah to Rás Baalbekk, a village said to be the most beautiful in Syria, but which is really only a patch of gardens at the foot of bleak barren hills situated on the edge of an almost desert plain. Our ride was altogether about thirty-six miles.

Leaving our camp at Er Rás the next morning, we made an excursion to 'Ain Zerka, the great source of the 'Ási. The valley down which this river flows is called, between Lebweh and 'Ain Zerka, El Majerr, after which point it takes the name of 'Así. Starting at 5.40 a.m. we rode over the plain, and reached 'Ain Zerka in two hours. It is a very pretty spring, overhung with plane trees, from which depend graceful festoons of wild vine. About 200 yards below it is a second and more copious spring, the Neb'a 'Ási itself; and the Orontes, which above the Zerka was only a trickling stream not a foot deep, now rushes on a swollen and impetuous river, 70ft. or more in width, and from 3 to 6ft. deep. The valley here is very deep; on the eastern side the rocks are conglomerate limestone, but on the western bank there is a lower stratum of sandstone. Although the river is thickly lined with trees, the valley is so deep that standing a little distance off upon the plain above, one might fail to notice its existence. High up in the rocks, about 300 yards on the right bank of the valley below the Neb'a 'Ási on the eastern bank of the wády, is the rock-hewn convent of Már Marún, the founder of the Syrian Christian sect of the Maronites. It is a picturesque place, entirely excavated in the living rock, and faced with masonry in

which are loopholes for the defence of the convent. The entry is into a small chamber half cut in the rock, then we pass along a passage formed by a wall of masonry built upon a ledge of rock facing south. In the face of the cliff behind this wall are niches cut in the stone. We next cross by a bridge of earth and boughs (constructed by the Arabs, who still make use of the place) into the interior of the excavation, and find it to consist of three large chambers and one small one on the ground floor. The innermost of these has evidently served for the church. The first floor is reached by a staircase hewn in the live rock, and contains only one room; the second storey can only be gained by a ladder through a circular hole in the roof of the first floor at the head of the staircase. The convent is in the lower part of a steep cliff about 150ft. above the bed of the Orontes. Returning to 'Ain Zerka, we breakfasted and rode off to the Camúá Hirmil, a singular isolated monument on an elevated ridge, commanding an extensive view of the neighbouring plain. It is a square monument consisting of three storeys, the upper one pyramidal in shape, the second a square with a pilaster at each corner, and two on each face; the lower one is also square, with a pilaster at each corner, and the whole rests on five steps, two of limestone, and the other three of black basalt, which here crops out. The masonry is solid, as can be seen on the south-west side where the face has broken away. On the faces of the lower storey are rude bas-reliefs, representing animals, and weapons of the chase, bows, arrows, hunting-knives, quivers, and the like. The north-west has two bears; the north-east two stags, one standing and the other couchant and wounded; the south-east two dogs and a wild boar; and on the south-west (the broken) side are the remains of what was apparently the figure of a gazelle pursued by a dog.

The monument probably marks the site of the ancient Paradisus. This word signifies "a hunting park," and the nature of the sculptures, as well as the correspondence of the situation with the topographical notices of that locality found in ancient authors, points almost with certainty to this conclusion.

We next rode over the plain to the village of El Ká'ah, where there is a fort built by Fakhr Eddín Ma'án, as a half-way station between Baalbekk and Hums (the ancient Emesa). After a light meal with the sheikh of the village, we returned to Rás Baalbekk, which we reached about 5 p.m. after a ride of over twenty-five miles, and having arrived in camp we proceeded to inspect the ruins existing in the neighbourhood. On a hill to the north-east of the town is a ruined church called Der Már Túma, "St. Thomas' Convent," and below this, in the bed of the wády, is another convent dedicated to St. John, the only present denizen of which is a single monk, who remains there in order to keep up the territorial rights of his fraternity. In the precipitous cliffs at the head of the wády are some caves which once formed part of the convent of Már Kúlía.

Close by the town, and also situated on the bed of the wády, are some

traces of older buildings, viz., the convent of Mar Sim'án, the foundations of a large Byzantine church, with three apses, and to the north-west of the town the convent of St. John. The ancient name of Rás Baálbekk, according to the Arabs, was Catíneh; it is called Rás Baálbekk because the hills on which it stands project like a headland (Rás) into the Buka'ah. The ruins of the old town lie to the south-west of the city, amongst the vineyards and trees.

The housetops here, as in many other Syrian villages, are covered with compressed dung arranged in square or round enclosures; these are used as sleeping-places (!) in summer, and as fuel in winter, wood being very scarce in the country.

Striking across the plain in a north-westerly direction on the following morning, we came, after an hour's ride, to the foot of the moraine which leads up into Wády Fára. This is a winding, thickly-wooded valley filled with *butmeh*, wild pear, sindián, hawthorn, juniper, and arbutus trees; it flows down from the sub-range of es-Sha'areh at the foot of Lebanon. On our way we passed a furnace for making pitch, which is obtained from the *butmeh* or terebinth, just alluded to. For three hours we continued to ascend this valley, and at the expiration of that time reached the uplands—a valley dividing es-Sha'areh from the Lebanon proper. In the centre of this valley is a spring called 'Ayún Urghush, which we reached in another hour, and where we stopped to breakfast. The waters of this spring, after flowing for a short distance, sink into the ground and are lost to sight. We found the same to be the case, not only with all the other springs on the mountain, but with almost every hollow where the snow collects, and this fact may account for the immense force with which the waters rush out in the springs at the foot of the range. Crossing over the watershed into Wády Nussúr, amongst rugged limestone *débris*, we arrived after two hours at 'Ain Atá, a little collection of mud hovels, situated at the point where the wády first begins to widen out and present any appearance of fertility, for the intermediate distance had been over ground rough and barren in the extreme. The stream which runs along the wády is fringed with drift-wood, showing the force with which the winter torrents rush along its bed. Some of the Maronite inhabitants here came up to welcome Captain Burton as the French consul, and began to deliver an address replete with fulsome praise to the French and depreciation of the English. On being warned, however, of their mistake, they as suddenly veered round, and said they had tried the French as allies, but finding them wanting, had adopted the English as their only friends! We encamped beneath some fine walnut trees on the side of the valley opposite to 'Ain Atá, and near a rapid stream. The waters of Wády Nussúr flow southward into the Birket Yamúneh, a small lake which we could just see in the distance.

The next day was devoted to the exploration of the summit of Lebanon, for which the unusual drought that had prevailed during the past year, and the lateness of the season, afforded us unusual advantages.

In the spring and winter, when travellers usually visit the neighbourhood, the mountain is covered with snow, and the passes scarcely practicable. The summit is rarely, if ever visited. I do not suppose that even in the worst season the summit of Lebanon would present any formidable difficulties to an Alpine mountaineer, but it must be remembered that the Syrian traveller carries his hotel upon his mules' backs, and is therefore compelled to regulate his marches by the endurance of his animals and guides. We started at 5.30 a.m. and reached the top of the pass in an hour and a half. The view from this was very fine, as it comprised on the east the greater part of the Buka'a, bounded only by the range of Jebel Sherkíyeh (Anti-Lebanon) and Jebel es Sheikh; to the south-west were the mountains of Sunín, the lower portion of the Lebanon range, with the Birket Yamúneh lying between it and the ridge on where we stood. To the north rose the lofty snow-capped peaks, the ascent of which was to form our day's work, and on the west opened out an entirely new prospect—the steep descent into Wády el Cadíseh, the little patch of cedars on the mountain side, the rugged steep-banked Wády Cadíseh itself, and the coast line with the sea stretching out for miles and miles beyond. On the very surface of the sea innumerable clouds appeared to rest, invisible from below, but gradually rising throughout the day until they ultimately covered the mountain tops and enveloped them in mist. This side of the mountain, viz., that in which the cedars lie, forms a huge amphitheatre or basin, which, although the most decided and remarkable feature in the landscape, has been entirely neglected by cartographers, and even unnoticed by the surveying party sent out here by the French government. The Lebanon proper consists of five peaks, which we visited one after the other, ascertaining the comparative heights with the aneroid. The walking was very severe, lying all the way over deep valleys filled with snow.

Descending by a steep zigzag path to the cedars, we pitched our camp and proceeded to examine the sacred and renowned grove, and could not repress a feeling of disappointment at its small extent, and the insignificant appearance of the trees. They consist of a little clump of trees of comparatively modern growth, not more than nine of them showing any indications of a respectable antiquity, and covering only about three acres of ground. They stand on a ridge consisting of five mounds and two spurs running nearly east and west, as in the accompanying plan.

The whole number of trees we estimated at about 355; their size has also been grossly exaggerated, none of them being over 80ft. high. The ground is covered with *débris* of cedar and white limestone, and in the centre of the clump is a hideous little building, a Maronite chapel, the appointments of which are painfully poverty-stricken and inadequate. The trees have been lopped and otherwise maltreated, especially by the irrepressible tourist, who has been at infinite pains to cut his name on every available trunk. One tree, rather a large one,

has a hole in it where a branch had broken away, and this has been enlarged into a chamber. They are scrubby scanty specimens, and not half so fine as may be seen in many an English park.

In the afternoon we walked down towards Wády Cadíseh to Neb'a Már Sim'án, a gorgeous fountain situated about an hour and a half from the cedars, where the water streams out in a perfect torrent on the north side of the valley, and flows down to the village of B'sherreh. On our way we passed other springs, 'Ain es Siyár, Neb'a en Nebát and Neb'a Harfúsh. The view of Wády Cadíseh, on emerging from the cedars, was the finest we had seen in Syria; the deep-cut ravine, the huge regular-shaped amphitheatre, a tall saddle-backed hill called Saiyidat el Hosan cutting the horizon line towards the sea, the fertile hill sides, the picturesque mountain outlines, and above all the soft Alpine colouring, deep green and softest blue, all this was an agreeable change from the monotonous character of the scenery through which we had lately passed.

At the cedars we took leave of our kind travelling companions, who were going to visit the Maronite patriarch at Kanabín on their road to Jebel Sunín, and keeping along the slope of the mountains to the north of Wády Cadíseh, reached Ehden in two and a half hours by an exceedingly rough and difficult road. The country through which we passed was excessively fertile, the hill sides being covered with cultivated terraces, and yielding abundant crops of corn, maize, potatoes, *turmus*, &c. Near Ehden also are large plantations of mulberry trees, for feeding silk worms; the cultivation of which forms one of the staple commodities of the country on the western slopes of the Lebanon. It was a market day when we arrived, and we found the town crowded with buyers and sellers, every one dressed in their gayest attire. The sight was very picturesque, the men in red embroidered 'abbas or gay jackets, the women wearing gay muslins and cottons and enormous trousers, the married females wearing a kind of silver saucepan on their heads and an extensive turban. There is a large convent here not yet finished, and dedicated to Már Jirjis. On the south side of the valley we passed the villages of Haddat, Jesúreh, and Kefeirat Ghúb. At Ehden we breakfasted in the open street on grapes, figs, and bread.

Continuing our journey in a north-westerly direction, we reached Carn Caitú, a hill which forms the last of the ridge overlooking the coast plain. On the north-east of this hill we found a large sarcophagus cut out of a single isolated block of stone; it is shaped like a gondola, and measures 20ft. in length, by 7ft. in breadth. It is called Námús el 'Abd. The earth has been partially removed from it, the natives having, a few years ago, dug there in search of treasure. About twenty-five yards to the north of this are the ruins of an ancient temple about 20ft. by 18ft., standing on a levelled platform at the edge of a precipitous cliff. The green wooded hill immediately to the north of this is called El 'Ajabíych. A very steep and awkward road, called 'Akabat Hairúní, led us down to the edge of the hills on the coast

south of Tripoli. The edge of the plain was reached in two hours, and in three hours more we came to Zaghartah, where we encamped. The country is extremely fertile, abounding in olives and mulberry trees. On our way we passed the villages of Farfatah, Dáráyah, and Farhátah, all of which were quite deserted, the inhabitants having gone up into the mountains for the summer. We pitched our tent by the side of the river which runs by Zaghartah, after having been eight and a half hours on the road.

From Zaghartah we reached Tripoli by an excellent road in about an hour, passing a village called Almah on our way. The town is picturesque, but extremely dirty and uncomfortable, consisting of narrow gloomy arched streets knee-deep in filth and decayed vegetables. It is situated at the foot of the plateau which here falls in a step of from 200ft. to 300ft. on to the shore plain. A fort at the east of the town commands it, but is itself overlooked from the hill above. The Mína, or port, is some three miles distant on the coast, and the intervening ground is thickly covered with trees. It is a hot unhealthy place, and the population chiefly Muslim. In two and a half hours from Tripoli we reached Cal'at el Mesáliheh, passing the village of Ameyún and two little wayside inns or stores called Dúkán 'Asfúr and Dúkán el Hirreh. Next crossing a promontory called Rás Núríyeh, we passed by a steep winding road amongst rather picturesque hills into Wády Emseilihah, where there is a picturesque old fort perched upon a tall isolated rock in the centre of the valley. An hour and three quarters from Tripoli we came upon the remains of a small temple and other adjacent ruins by the sea shore. In three hours from Rás Núríyeh we reached Batrún, a well-to-do, neat, little Christian town, where we rested for the night.

Outside the town are several small smelting furnaces, and immediately below the surface of the ground we could detect a rich vein of iron ore which is worked to a small extent by the inhabitants of the place. Diving for sponges is one of the chief occupations of the poorer peasants in this part of the coast, and we saw many men engaged in their dangerous pursuit as we rode along.

Three and a half hours from Batrún brought us to Jebeil, a compact little walled town noted for producing the best tobacco (*Jebeili*) in Syria. This place is the ancient Byblus; numerous columns of grey granite and sarcophagi were lying about in the neighbourhood. Here we stopped to lunch off some magnificent grapes, which we bought for a farthing a pound.

In an hour and a half we reached Nahr Ibrahím, anciently called the Adonis, a considerable stream, the mouth of which is closed in by a large bar of shingle. Immediately past it is the small village of Dákaibeh, and two and a half hours further on is situated, in a very pretty bay, the mercantile and maritime village of Júnieh. On the hills above (the slopes of Jebel Kesrwán) are large mulberry plantations, villas, silkworm manufactories, &c., all of which give an air of

life and civilisation to the place. The luxuriant vegetation coming down to the edge of the sea, the general richness of the soil, and the softness of the colouring, reminded us forcibly of southern Italy. In an hour and a quarter more we passed over a space of thickly wooded land, and came to the Nahr el Kalb, or Dog River, where we bathed and encamped.

After examining the famous tablets, all of which, except the Latin and part of the Assyrian one, are too much effaced to be legible, we walked up the valley for some distance, but could discover no traces of an ancient road continued along the rocks. Indeed such a work would have been unnecessary, as the wády widens out, and is now practicable for mules. Near the bridge on the south side of the stream is a long Arabic inscription on the flat face of the rock, 15ft. long by 5ft. deep; it is much effaced, but the style of the writing, which is beautifully executed, greatly resembles that of the period of the famous monarch El Melik ed Dháhir.

On the north side of the valley is a fine old aqueduct, built on large arches. A short and pretty ride along the shore brought us at last to Beyrout, where we were soon installed in Bassoul's comfortable hotel.

NOTE.—The Map of Moab published with this number of the *Quarterly Statement*, completes the geographical work of Mr. Palmer, the larger portion of which was embodied in the map of the Tih Desert. Some of the work of Captain Warren is also incorporated in it. Like its predecessor, this map is only a route-sketch, the route of the travellers being marked throughout. In the next number of the *Quarterly Statement*, Mr. Palmer proposes to give transcriptions of all the inscriptions in the Haram es Sherîf, together with their translation, and a complete account of the history of the Mosque, drawn from Arabic sources. A notice of some other inscriptions in Jerusalem, and notes of a journey through Palestine, will be included in the same paper.

NOTE ON THE METEOROLOGICAL OBSERVATIONS

Published in the "Quarterly Statement" (First Series, Nos. III., IV., and V.)

A writer, M. Alfred Gautier (Professor of Astronomy), in the "Archives des Sciences de la Bibliothèque Universelle," after quoting the results arrived at by Mr. Glaisher and published as above, gives the following comparative table of mean temperatures:—

	Mean of Year.	Mean of Winter.	Mean of Summer.	Latitude.
	Degrees.	Degrees.	Degrees.	Deg. Min.
Bagdad	23·2	9·8	34	33 21
Cairo	22·3	14·7	29·5	30 2
Tunis	20·4	13·2	28·3	36 48
Catania	19·6	12·6	26·9	37 30
Algiers	17·9	12·4	23·6	36 47
Constantine	17·2	10·2	26·6	36 20
Barcelona	17·2	10·1	25·0	41 23
Jerusalem	17·0	9·8	23·3	31 47

Or reduced to Fahrenheit—

	Mean of Year.			Mean of Winter.			Mean of Summer.		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	Deg.	Min.	Sec.
Bagdad	66	20	9·6	46	30	14·4	82	19	12
Cairo	65	0	14·4	53	45	21·6	75	39	36
Tunis	62	11	31·2	41	32	9·6	73	53	2·4
Catania	61	0	28·8	50	38	52·8	71	48	43·2
Algiers	58	29	31·2	50	21	7·2	66	55	40·8
Constantine	57	27	21·6	47	5	45·6	71	22	48
Barcelona	57	27	21·6	46	56	52·8	69	0	0
Jerusalem	57	2	9·6	36	30	14·4	51	41	2·4